DECISION RECORD

Decision: It is my decision to authorize the issuance of a ten year grazing lease on public lands on the Canaan land and Cattle Co. Ranch, Allotment #65031. The lease will allow 20 Animal Units yearlong at 100 % Public Land for 240 Animal Unit Months. Any additional mitigation measures identified in the environmental impacts sections of the attached environmental assessment have been formulated into stipulations, terms and conditions. Any comments made to this proposed treatment were considered and any necessary changes have been incorporated into the environmental assessment.

signed by T. R. Kreager 1/12/01
Acting Associate Field Office Manager - Resources Date

ENVIRONMENTAL ASSESSMENT
for
GRAZING AUTHORIZATION

ALLOTMENT 65031, SECTION 15

EA-NM-060-00-180

August, 2000

U.S. Department of the Interior
Bureau of Land Management
Roswell Field Office
Roswell, New Mexico

I. Introduction

When authorizing livestock grazing on public range, the Bureau of Land Management (BLM) has historically relied on a land use plan and environmental impact statement to comply with the National Environmental Policy Act (NEPA). A recent decision by the Interior Board of Land Appeals, however, affirmed that the BLM must conduct a site-specific NEPA analysis before issuing a permit or lease to authorize livestock grazing. This environmental assessment fulfills the NEPA requirement by providing the necessary site-specific analysis of the effects of issuing a new grazing lease on allotment #65031.

The scope of this document is limited to the effects of issuing a 10 year grazing lease, other future actions such as range improvement projects will be addressed in a project specific environmental assessment. There are no current plans for additional management actions on this allotment.

A. Purpose and Need for the Proposed Action

The purpose of issuing a new grazing lease would be to authorize livestock grazing on public lands on allotment #65031. The lease would specify the types and levels of use authorized, and the terms and conditions of the authorization pursuant to 43 CFR §§4130.3, 4130.3-1, and 4130.3-2.

B. Conformance with Land Use Planning

The Roswell Resource Management Plan/Environmental Impact Statement (October 1997) has been reviewed to determine if the proposed action conforms with the land use plan's Record of Decision. The proposed action is consistent with the RMP/EIS.

C. Relationships to Statutes, Regulations, or Other Plans

The proposed action is consistent with the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1700 et seq.); the Taylor Grazing Act of 1934 (43 U.S.C. 315 et seq.), as amended; the Clean Water Act (33 U.S.C. 1251 et seq.), as amended; the Endangered Species Act (16 U.S.C. 1535 et seq.) as amended; the Federal Rangelands Improvement Act of 1978 (43 U.S.C. 1901 et seq.); Executive Order 11988, Floodplain Management and Executive Order 11990, Protection of Wetlands.

Proposed Action and Alternatives

A. Proposed Action:

The proposed action is to authorize H. Huston Estate a grazing lease for 20 cattle yearlong at 100% Federal Range for 240 Animal Unit Months (AUM's)

B. No Lease authorization alternative:

This alternative would not issue a new grazing lease. There would be no livestock grazing authorized on public land within allotment #65031. The No Grazing alternative was considered, but not chosen in the Rangeland Reform Environmental Impact Statement (EIS) Record of Decision (ROD) (p. 28). The elimination of grazing in the Roswell Field Office Area was considered but eliminated by the Roswell RMP/ROD (pp. ROD-2).

III. Affected Environment

A. General Setting

Allotment #65031 is located in Chaves County, approximately 22 miles south of Elida, New Mexico. The Ranch consists 951 acres of Public land. The ranch also contains private and state land, but these lands are not credited because only the Public land is accounted for under this section 15 lease.

This allotment lies outside of the Roswell Grazing District boundary established subsequent to the Taylor Grazing Act (TGA). Grazing authorization on Public Lands outside of the Grazing District boundary is governed by section 15 of the TGA and are commonly referred to as section 15 lands. Overall livestock numbers for the ranch are not controlled under this section 15 lease. The amount of forage produced on Public land is the determining factor on the number of authorized livestock.

The landscape is relatively flat, sandy, grassland with small draws draining the area. More detailed information of the area is discussed under the affected resources section.

The following resources or values are not present or would not be affected: Prime/Unique Farmland, Areas of Critical Environmental Concern, Floodplains, Minority/Low Income Populations, Wild and Scenic Rivers, Invasive Non-Native Species, Hazardous/Solid Wastes, Wetlands/Riparian Zones. Native American Religious Concerns. Cultural inventory surveys would continue to be required for public actions involving surface disturbing activities.

B. Affected Resources

1. Soils: The two primary soil units on this ranch are the Nutivoli-Jalmar fine sand and Faskin, moist-Douro loamy fine sand.

Nutivoli-Jalmar fine sand

Nutivoli - The surface layer is fine sand about 9 inches thick. The subsoil is a fine sand to a depth of 60 inches or more. Permeability of the Nutivoli soil is rapid, water capacity is low, runoff is slow, while the soil blowing hazard is very high.

Jalmar - The surface layer is fine sand about 28 inches thick. The subsoil is a sandy clay loam about 34 inches thick. Permeability of the Jalmar soil is moderate, water capacity is moderate, runoff is slow, while the soil blowing hazard is very high.

Faskin, moist-Douro loamy fine sand

Faskin - The surface layer is loamy fine sand about 7 inches thick. The subsoil is a sandy clay loam about 53 inches thick The permeability of this soil is moderate, water capacity is high, runoff is medium, while the soil blowing hazard is very high.

Douro - The surface layer is loamy fine sand about 11 inches thick. The subsoil is a sandy clay loam about 22 inches thick The permeability of this soil is moderate, water capacity is low, runoff is medium, while the soil blowing hazard is high.

For in depth discussion of the soils in the area, please refer to the Soil Survey of Chaves County New Mexico Northern Part, published by the Natural Resources Conservation Service (NRCS). A copy of this publication is available for review at the BLM Roswell Field Office or at any NRCS office in southeastern New Mexico.

2. Vegetation:

The primary ecological (range) sites on the public lands in this allotment are Deep Sand HP-3. Key vegetation is shinnery oak with bluestem and dropseed grasses. The Deep Sand community is a unique ecological area dominated by tall and mid-grasses. In many areas, the shinnery oak community has shifted from a dominant sand bluestem/little bluestem/hairy grama grassland with varying amounts of shinnery oak, sand sage and yucca to a community dominated by sand dropseed, red and purple three-awn and hairy grama, with increasing annual forbs, shinnery oak, mesquite, sand sage and yucca. A vegetation inventory was completed in 1991 and additional vegetation monitoring completed in April of 2000.

The RMP/EIS established resource objectives for the Shinnery Oak Dune community. The vegetative cover by percent composition objectives for the SOD community are grasses 50 - 70 %, forbs 10 - 15 %, shrubs & trees 25 - 40 %. The ground cover

objectives for this community are: bare ground 5 - 20 %, litter 25 - 70 %, small & large rock 0 - 1 %, grass & forbs 16 - 40 % and shrubs & trees 3 - 17 %.

Results of the April 2000 monitoring studies are as follows:

Monitoring Data Summary, Allotment #65031							
Deep Sand HP-3 Ecological Site							
	Grasses	forbs*	shrubs	trees	litter	bare ground	rock
Percent composition of vegetative cover	78.99	0	20.66	0.33	N/A	N/A	N/A
Percent ground cover	46.66		6.66		28.33	18.33	0

*Forb percentages are not accurately reflected due to collection techniques. On pace point monitoring, only perennial species are recorded.

The current vegetative resources on this allotment appear to be stable and the rangeland trend is static. The data used for this assessment is available at the Roswell Field Office.

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3. Wildlife: Game species occurring within the area include mule deer, pronghorn antelope, mourning dove, and scaled quail. Raptors that utilize the area on a more seasonal basis include the Swainson's, red-tailed, and ferruginous hawks, American kestrel, and great-horned owl. Numerous passerine birds utilize the grassland areas due to the variety of grasses, forbs, and shrubs. The most common include the western meadowlark, mockingbird, horned lark, killdeer, loggerhead shrike, and vesper sparrow.

The warm prairie environment supports a large number of reptile species compared to higher elevations. The more common reptiles include the short-horned lizard, lesser earless lizard, eastern fence lizard, coachwhip, bullsnake, prairie rattlesnake, and western rattlesnake.

A general description of wildlife occupying or potentially utilizing the proposed action area and associated Habitat Management Areas refer to the Affected Environment Section (p. 3-62 to 3-71) of the Draft Roswell RMP/EIS (9/1994).

4. Threatened and Endangered Species: There are no threatened or endangered species populations or critical habitat areas within the allotment.

Special Status Species

Lesser Prairie Chicken

A petition was filed with the U. S. Fish and Wildlife Service (FWS) to list the prairie chicken as threatened in 1995. On June 1, 1998 the FWS announced a finding for the petition. After review of all available scientific and commercial information, the Service finds that listing this species is warranted but precluded by other higher priority actions to amend the Lists of Endangered and Threatened Wildlife and Plants. The lesser prairie chicken is added to the Service's candidate species list.

In southeastern New Mexico, lesser prairie chickens exist in the shrub- dominated High Plains Bluestem Subtype by using mixed stands of tall grass and shinnery oak.

Male prairie chickens visit or establish booming grounds (leks) from early March to late May, with the peak booming activity occurring around the middle of April. Booming grounds can be found in mesquite shortgrass, shinnery oak grasslands, shinnery oak dunes, abandoned oil/gas pads, pipelines and roads. The basic requirement for lek sites is visibility of the immediate surroundings (shortgrass and topography)..

Female prairie chickens prefer range in excellent condition for nesting. In areas of shinnery oak, nesting studies (Copelin 1963, Riley 1978) indicate that these birds prefer shinnery oak rangeland habitat dominated by mid and tall grass species. Wisdom (1980) demonstrated that nesting success was enhanced by the presence of tall, wide clumps of sand bluestem, which are found in a few near-climax areas in the shinnery oak-grassland, while areas devoid of sand bluestem were not highly conducive to nesting success. In areas where sand bluestem is scarce, little bluestem apparently serves as an acceptable substitute Merchant (1982). Riley et al. (1992) found that most successful nests occurred where basal composition of sand bluestem was greater and the height of vegetation above successful nests averaged 67 cm, while height of vegetation above unsuccessful nests averaged 35 cm.

Copelin (1963) found that the most successful nests were placed between clumps of grass residue left from the previous year's growth that provided overhead cover.

Brooding areas are often within habitats which are in lower seral stages usually having a high proportion of bare ground and annual forbs (Riley et al. 1992, Jones 1963).

Food requirements vary among the seasons. Prairie chickens rely heavily (97%) on forbs and other green plant material during the spring and invertebrates in the summer. The early fall diets consist of invertebrates and green plant material, while winter diets consist of mast from shinnery oak.

Above is a general description of prairie chicken habitat requirements. As with most wildlife species, especially upland game birds, precipitation plays a large role in population fluctuations and habitat conditions. Precipitation patterns have fluctuated drastically for the last twenty years. During the middle eighties precipitation was above normal and

chicken populations responded very well. For the exception of two years, precipitation has been well below normal during the 1990's.

Population Monitoring Data

The Roswell Field Office has actively monitored prairie chicken booming grounds, population trends and habitat since the early seventies within the Caprock Wildlife Habitat Area. Historically in New Mexico, the LPC occupied most of the eastern plains. However, numbers and occupied range of the species are much reduced since pre-settlement times; apparently in response to prolonged heavy grazing and brush control in combination with the great drouths of the 1930's and 1950's. It has been reported that currently the LPC occupies approximately one half their original range in New Mexico.

This small parcel of public land lies adjacent to one of the New Mexico Department of Game and Fish prairie chicken management areas (Marshall). Since this tract of public land is small, isolated and adjacent to the the Marshall prairie chicken management area, the Bureau did not conduct prairie chicken surveys until 1997. In the spring of 1998, two active booming grounds were found close to the Marshall area. One is located on private land just east of the east boundary in section 14 and one on public land just west of the west boundary in section 15. The booming grounds had 4 and 10 birds respectively.

5. Livestock Management: The allotment is operated as a cow-calf ranch. The expiring grazing lease is for 20 Animal Units (AU's) yearlong at 100% Public Land for 240 Animal Unit Months (AUM's). Actual livestock numbers on the entire ranch are not controlled by the BLM as explained in the General Setting portion of the Affected Environment section above.

This ranch consists of three pastures, the pastures are under a rotation based on precipitation patterns and availability of livestock waters. The west side of the ranch is dependant on a windmill for livestock water, the east side is serviced by a water well with a submergible electric pump. When forage conditions are good and livestock water is available, the cows are spread throughout the entire ranch. During times of drought, or low wind, livestock are concentrated in pastures with available water. This in effect creates a rotation where two of the three pastures are have no livestock during part of the growing season.

6. Visual Resources: The allotment is located within a Class IV Visual Resource Management area. This means that contrasts may attract attention and be a dominant feature in the landscape in terms of scale. However, the changes should repeat the basic elements of the landscape.

7. Water Quality: No perennial surface water is found on the Public Land on this allotment.

8. Air Quality: Air quality in the region is generally good. The allotment is in a Class II area for the Prevention of Significant Deterioration of air quality as defined in the public Clean Air Act. Class II areas allow a moderate amount of air quality degradation.

9. Recreation: Recreation opportunities are very limited in this grazing allotment because the public has limited legal/physical access to public lands. The parcel of Public lands within this allotment are surrounded by private lands.

Off Highway Vehicle designation for public lands within this allotment are classified as "Limited" to existing roads and trails.

10. Cave/Karst: A complete significant cave or karst inventory has not been completed for the public lands located in this grazing allotment. Presently, no known significant caves or karst features have been identified within this allotment. If at a later date, a significant cave or karst feature is located on public lands within this allotment, that cave or feature may be fenced to exclude livestock grazing and Off Highway Vehicle Use. A separate environmental analysis would be prepared to construct this exclosure fence.

This allotment is located within a designated area of Low Karst or Cave Potential.

IV. Environmental Impacts

A. Impacts of the Proposed Action

1. Soils: Livestock remove the cover of standing vegetation and litter, and compact the soil by trampling (Stoddart et al. 1975). These effects can lead to reduced infiltration rates and increased runoff. Reduced vegetative cover and increased runoff can result in higher erosion rates and soil losses, making it more difficult to produce forage and to protect the soil from further erosion. These adverse effects can be greatly reduced by maintaining an adequate vegetative cover on the soil (Moore et al. 1979). Rangeland vegetation inventory data from the allotment indicates that, at the level of grazing identified in the proposed action, the percent bare ground and rock found on the allotment fall within the parameters established by the RMP/EIS for this vegetative community. Proper utilization levels and grazing distribution patterns are expected to retain sufficient vegetative cover on the allotment, this will maintain the stability of the soils. Soil compaction and excessive vegetative use will occur at small, localized areas such as bedding areas and along trails. Positive affects from the proposed action may include acceleration of the nutrient cycling process and chipping of the soil crust by hoof action may stimulate seedling growth and water infiltration.

2. Vegetation: Vegetation will continue to be grazed and trampled by domestic livestock as well as other herbivores. The area has been grazed by livestock since the early part of the 1900's, if not longer. Ecological condition and trend is expected to remain stable

and/or improve over the long term with the proposed authorized number of livestock. Rangeland vegetation inventory data indicates that there is an adequate amount of forage for the proposed number of livestock and for wildlife.

3. Wildlife: Wildlife will continue to compete with domestic livestock for forage and browse. Cover, and other habitat requirements for wildlife will remain the same as the existing situation. With proper utilization levels there will be adequate cover and forage for wildlife species; resulting in sustainable wildlife populations for those species that occupy the area.

4. T&E species: Under the proposed action there would be no affect to Federal threatened and endangered species since there are no known T/E occurrences within this allotment.

Special Starus Species

Under the proposed action, lesser prairie chicken habitat would continue to be maintained. Vegetative composition and utilization levels on key grass species are such that the allotment provides most if not all of the habitat requirements needed for lesser prairie chickens. An indication of this habitat quality is the increase in birds observed this year.

5 Livestock Management: Livestock would continue to be grazed under the same management system and the same numbers as authorized under the expiring lease. No adverse impacts are anticipated under the proposed action.

6. Visual Resources The continued grazing of livestock would not affect the form or color of the landscape. The primary appearance of the vegetation within the allotment will remain the same.

7. Water Quality -. The drainages on the allotment are ephemeral, so direct impacts to surface water quality would be minor, short-term impacts during stormflow. Indirect impacts to water-quality related resources, such as fisheries, would not occur. The proposed action would not have a significant effect on ground water. Livestock would be dispersed over the allotment, and the soil would filter potential contaminants.

8. Air Quality: Dust levels under the proposed action would be slightly higher than under the no grazing alternative due to allotment management activities. The levels would still be within the limits allowed in a Class II area for the Prevention of Significant Deterioration of air quality.

9. Recreation: Grazing would have little or no affect on the recreational opportunities, since the recreating public has no legal or physical access to this parcel of public land. Recreation activities that could occur within this grazing allotment are limited or non-existent due to land status patterns.

10. Caves/Karst: No known significant caves or karst features are known to exist on the public lands located within this allotment. Grazing would not affect the karst resources.

B. Impacts of the No Livestock Grazing Alternative.

1. Soils: . Soil compaction would be reduced on the allotment around old trails and bedding grounds, there would be a small reduction in soil loss on the allotment.

2. Vegetation: It is expected that the number of plant species found within the allotment will remain the same, however, there would be small changes in the relative percentages of these species. Vegetation will continue to be utilized by wildlife. There would be an increase in the amount of standing vegetation.

3. Wildlife: Wildlife would have no competition with livestock for forage and cover.

4. T&E Species: There would be no impacts to threatened or endangered species or habitat.

Special Status species habitat would be improved.

5. Livestock management: The forage from public land would be unavailable for use by the lessee. This would have a significant adverse economic impact to the livestock operation. If the No Grazing alternative is selected, the owner of the livestock would be responsible for ensuring that livestock do not enter Public Land [43 CFR 4140.1(b)(1)]. The checkerboard land status on the allotment makes it economically unfeasible to fence out the public land and use only the private land.

6. Visual Resources: There would be no change in the visual resources.

7. Water Quality: There could be slight improvement in water quality due to the minor reductions in sediment loading during stormflow.

8. Air Quality: There would be a slightly less dust under this under this alternative versus the proposed alternative, but this would be negligible when considering all sources of dust.

9. Recreation: Impacts would be the same as the proposed action.

10. Caves/Karst: Impacts would be the same as the proposed action.

V. Cumulative Impacts

Cumulative impacts of the grazing and no grazing alternatives were considered in Chapter 4 of Rangeland Reform `94 Draft Environmental Impact Statement and in Chapter 4 of the Roswell Resource Area Proposed RMP/EIS. The no livestock grazing alternative was not selected in either document.

On the allotment specific level, there will be no cumulatively significant impacts from the proposed action /alternatives or from the no grazing alternative.

VI. Residual Impacts

The area has been grazed by livestock since the early part of the 1900's if not longer. Recent vegetative monitoring studies have shown that grazing , at the current permitted numbers of animals, is sustainable. If the mitigation measures are enacted, then there would be no residual impacts to the proposed action

VII. Mitigating Measures And/Or Permit/Lease Conditions

Vegetation monitoring studies will continue to be conducted and the permitted numbers of livestock will be adjusted if necessary. If new information surfaces that livestock grazing is negatively impacting other resources, action will be taken at that time to mitigate those impacts.

Literature Cited

Copelin,F.F.1963. The lesser prairie chicken in Oklahoma. Technical Bulletin 6. Oklahoma City: Oklahoma Wildlife Conservation Department.58 pp.

Davis,C.A.;Riley,T.Z.;Smith,R.A.;Suminski,H.R.;Wisdom,M.J. 1979. Habitat evaluation of lesser prairie chickens in eastern Chaves County, New Mexico. Final report to Bureau of Land Management, Roswell. Contract YA-512-CT6-61. Las Cruces: New Mexico State University, Department of Fishery and Wildlife Sciences. 141 pp.

Degenhardt, W.G.;Jones,K.L.1972. A new sagebrush lizard, Scelorporus graciosus, from New Mexico and Texas. Herpetologica 28.

Jones,R.E. 1963. Identification and analysis of lesser and greater chicken habitat. Journal of Wildlife Management 27: 757-778.

Merchant,S.S. 1982. Habitat-use, reproductive success, and survival of female lesser prairie chickens in two years of contrasting weather. M.Sc. thesis, New Mexico State Univ., Las Cruces.

Riley,T.Z.1978. Nesting and brood rearing habitat of lesser prairie chickens in southern New Mexico. Thesis NMSU. Las Cruces, N.M., 62 pp.

Riley,T.Z., C.A.Davis, M.Ortiz, and M.J.Wisdom. 1992. Vegetative characteristics of successful and unsuccessful nests of Lesser Prairie Chickens. J. Wildl. Manage. 56: 383-387.

Wisdom,M.J.1980.Nesting habitat of lesser prairie chickens in eastern New Mexico. M.Sc. Thesis, Univ. New Mexico,Las Cruces.

FINDING OF NO SIGNIFICANT IMPACT/RATIONALE

FINDING OF NO SIGNIFICANT IMPACT: I have reviewed this environmental assessment including the explanation and resolution of any potentially significant environmental impacts. I have determined the **proposed action** will not have significant impacts on the human environment and that preparation of an Environmental Impact Statement (EIS) is not required.

Rationale for Recommendations: The proposed action would not result in any undue or unnecessary environmental degradation. The **proposed action** will be in compliance with the Roswell Resource Management Plan and Record of Decision (October, 1997).

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T. R. Kreager, Date

Acting Associate Field Office Manager - Resources